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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/691,204   | 10/23/2003  | Ling-Ta Su           | 4459-0151P          | 5633             |
| 2292   | 7590        | 05/13/2005           |                     | EXAMINER         |
| BIRCH STEWART KOLASCH & BIRCH<br>PO BOX 747<br>FALLS CHURCH, VA 22040-0747 |             |                      |                     | PATEL, VIP       |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2879                |                  |

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/691,204             | SU ET AL.           |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Vip Patel              | 2879                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 October 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

|   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)              |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____.  |

### **Specification**

The specification is objected for following reasons. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed (see MPEP 606.01). A new title such as ---OLED WITH HEAT DISSIPATING COMPONENT---- is suggested.

### **Claim Rejections - 35 USC § 112**

Claims 6, 8, 12, 15, and 19 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 1 of claim 6, applicant claims a radiation coefficient of "the color". Here, it is not clear as to what exactly the applicant is intending to claim. Does a color have a radiation coefficient? A similar situation also appears in claim 19.

In line 1 of claim 15, the applicant claims that the covering component is "a passivation film". Here, it is not clear as to what exactly the applicant is intending to claim. From reading the specification, it is not clear as to what exactly is a passivation film.

In line 1-2 of claim 8, applicant claims that the lid and the heat dissipating pin have "power" dissipation equal to or less than 5 degrees C/W. It is not clear at all as to what exactly the applicant is intending to claim with phrase "power dissipation". A similar situation also appears in claim 12.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-5, 7, 10, 14-18, and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Rogers et al (US 5821692).

Regarding claim 1, 10, 14, 16 Rogers discloses an OLED (see figure 1) comprising a transparent substrate (12 of figure 1), a first electrode (16) disposed on the substrate, at least one organic functional layer (18 of figure 1) disposed on the first electrode, a second electrode (20 of figure 1) disposed on the organic functional layer, and a lid (covering component as per claim 10; 22 of figure 1) disposed above the second electrode which has a least one heat-dissipating pin (heat-dissipating component as per claim 10; 30 of figure 1) mounted on the lid.

Regarding claim 2, the lid and the heat-dissipating pin of Rogers' device are formed together (see figure 1).

Regarding claims 4 and 17, the lid and heat-dissipating pin of Rogers are made of a heat conducting material (see line 11 of column 3).

Regarding claims 5 and 18, the heat conducting material of Rogers' inherently has a heat conducting coefficient larger than 50 w/m-k since the alleged invention's heat conducting material and Rogers' heat conducting material are identical.

Regarding claims 7 and 20, the OLED of Rogers is mounted on a body contacted with heat-dissipating pin (see figure 1).

Regarding claim 15, Rogers' covering component (the lid) is a passivation film since it is constructed from identical material as it is alleged invention's covering component/lid or since Rogers' covering component/lid protects other components of OLED from oxidation.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers et al (US 5821692 and Aziz et al (US 6392250).

Regarding claims 3 and 11, claimed characteristics such as operational temperature (60 degrees or less) of OLED device is not deemed patentable since the applicant's disclosure fails to show such limitations to solve any problems or to yield any unobvious advantage that is not within the scope of the teachings applied. Secondly, this characteristic does not add anything to the claimed device or device of Rogers. Therefore, such limitations would be a matter of design alternative. Alternatively, Aziz et al, discloses OLED that has operational temperature of 60 degrees C. See line 53 of column 2. In the same paragraph, Aziz also discloses that it is advantageous to lower the operational temperature of OLED device in order to extend the life of the OLED device. Therefore, it would have been obvious at the time of the invention was made to a person having ordinary skill in the art to lower the operational temperature of OLED as taught by Aziz for extending operational life of an OLED.

Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers et al (US 5821692 and Sundahl (US 6777870).

Regarding claims 9 and 13, Rogers discloses all the limitations of claims 9 and 13 except the claimed fan disposed aside the heat dissipating pins.

However, in the same field of endeavor, Sundahl discloses such a fan (see line 60 of column 4) for expediently cooling pins and therefore device. Thus, it would have been obvious, at the time the invention was made, to a person having ordinary skill in the art to provide Sundahl' fan for the device of Rogers for expediently cooling the device of Rogers.

Claims 6, 8, 12, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers et al (US 5821692 and common knowledge in the art.

Regarding claims 6, 8, 12, and 19, Rogers discloses all the limitations except specific radiation coefficient or specific dissipating of heat dissipating pins. However, it is known in the art of OLED, as discussed above by Aziz reference, that it is desirable to have lower operational temperature for OLED. Therefore, it is also desirable to provide heat dissipating pins with suitable/maximum surface area or desirable radiation coefficient. In order to obtain this suitable surface area and radiation coefficient , an artisan must perform routine experimentation. Thus, an artisan performing routine experimentation may very well obtain a range of heat dissipating pins with suitable/maximum surface area or desirable radiation coefficient as claimed.

### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vip Patel whose telephone number is (571) 272-2458. The examiner can normally be reached on Monday-Thursday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh D Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



VIP PATEL  
PRIMARY EXAMINER  
ART UNIT 2879